

PURCHASE DESCRIPTION
TESTER, GROUND RESISTANCE

4446

- 1.0 GENERAL This procurement requires a ground resistance tester.
- 2.0 CLASSIFICATION The equipment shall meet the requirements of MIL-PRF-28800F, class 3, for Navy shipboard, submarine and shore applications.
- 2.1 Supplemental identification plate A supplemental identification plate is required and shall indicate the following:
 - a. Manufacturers name and/or cage
 - b. Part or model number
 - c. Serial number
 - d. National stock number
 - e. Contract number
 - f. "Part of" or "P/O" military nomenclature
- 3.0 OPERATIONAL REQUIREMENTS The equipment shall be capable of measuring grounding system resistance and soil resistivity.
- 3.1 Measurement range 2 ohms FS to 20 kilohms FS in multiple ranges.
 - 3.1.1 Resolution: 1 milliohm on lowest range.
 - 3.1.2 Accuracy: 2 ohm range: $\pm(1\% \text{ of reading} + 2 \text{ digits})$. All other ranges: $\pm(2\% \text{ of reading} + 2 \text{ digits})$.
- 3.2 Test current range 5 mA or less to 50 mA.
- 3.3 Display A 3-1/2 digit display is required. The display shall include indicators for excessive stray current levels, excessive potential-electrode resistance, excessive current-electrode resistance, low battery, and battery charge.
- 3.4 Controls and connectors All controls and connectors shall be designed so that they can be used by an operator wearing safety gloves.
- 4.0 GENERAL REQUIREMENTS
- 4.1 Power source MIL-PRF-28800 dc internal power source requirements are invoked as detailed below. The equipment shall be provided with either a "press to test" type of power switch or an automatic shut-off feature to prevent unintentional battery discharge.
 - 4.1.1 DC internal power source: Internal batteries and charger are required. Minimum operating time shall be 4 hours following a maximum recharge time of 14 hours. The charger shall operate from the nominal power source as specified in MIL-PRF-28800, and from an external 24-28 Vdc power source.
- 4.2 Weight 10 kg (22 lb) maximum, excluding accessories.

- 4.3 Lithium batteries Per MIL-PRF-28800F, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.
- 4.4 Accessories The equipment shall be provided with electrical safety gloves, ground rods, electrodes, and leads necessary for testing ground resistance over a radius of at least 250 feet, and the leads and electrodes required for making soil resistivity measurements over distances of at least 75 feet. These accessories shall be provided with their own carrying case. A plastic laminated accessory inventory list shall be provided and shall be attached to the case in such a manner as to minimize the potential for its physical damage. The case shall be marked in accordance with the reusable pouch or container requirements of MIL-PRF-28800F.
- 4.5 Technical manual Technical manuals shall be conformed to standard MIL-PRF-28800F. A Use and Installation manual (Operator's Manual) shall be provided separately. Maintenance and Servicing manual shall be provided with all three levels of maintenance; unit operational verification, module level, and component level. Technical manuals shall be provided in both printed and electronic formats. The printed format shall be otherwise normally provided. The electronic format shall consist of the installation programs for the latest version of Adobe Acrobat for all computer platforms for which Acrobat is available and the technical manual in an electronic form that is readable through use of the Adobe Acrobat application.
- 4.6 Optional Transit Case The ground resistance tester shall be supplied with a hard transit case as a line item option. The hard transit case shall be complied with the specification in the standard MIL-PRF-28800F.